



Saskatchewan  
Agriculture  
and Food

# Farm & Food Report

Communications Branch, Walter Scott Building  
3085 Albert Street, Regina, Canada, S4S 0B1

Saskatchewan

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Log Number: 07-37-174  
Week of September 10, 2007

## STUDENTS LEARN RESPONSIBILITY "FROM SEED TO SALAD"

"Imagine...indoor gardens in classrooms where children work together to grow vegetables, learning responsibility and co-operation, from seed to salad!" That's the mission of a project called Little Green Thumbs, which has been adopted and promoted by Saskatchewan's Agriculture in the Classroom (AITC) program.

"This past year, we piloted the Little Green Thumbs program and helped to set up indoor gardens in a handful of schools across Saskatchewan," said Sara Shymko, Executive Director of AITC Saskatchewan.

The program was offered at St. Maria Goretti and Cardinal Leger schools in Saskatoon, as well as schools on the Whitecap and Chief Poundmaker First Nations.

Growing vegetables was added to the regular curriculum of reading, writing and arithmetic. The students grew tomatoes, cucumbers, beans and peas. "It was pretty amazing to see. The tomato plants grew to touch the ceiling. They were over 14 feet tall!" Shymko noted.

"The students were very excited to be a part of the agricultural gardening process."

Shymko says the Little Green Thumbs program has several benefits for the students who participate in it. "This particular project allows students to be a part of the entire growing cycle. They actually plant the seeds themselves, water, fertilize, and watch the plants grow. Then, they get to harvest the vegetables and eat them," she stated.

Shymko believes the hands-on learning experience the initiative provides allows the children to understand the effort that goes into what they eat, as well as the hard work and dedication it takes to make our food products.

In terms of nutrition, the program also benefits the children by getting them excited about eating vegetables.

The goal of the Little Green Thumbs project is to generate excitement among students about agriculture and food. "The program gets students to start thinking about what is involved in food production. Then, when they are eating something that their moms have packed in their lunches, they will recognize that someone has put a lot of work into getting that product on the table for them," Shymko noted.

(more)

Plans are in the works to expand the program to more schools across Saskatchewan in the coming years. "It's definitely one of my favorite projects. The results have been so fantastic," Shymko said. "I am currently looking for funding so that I am able to expand the program to at least 10 more schools this year. Ultimately, I would like a garden in every school."

The Little Green Thumbs initiative, which originated in Calgary, is built around a kit that includes a 1,000-watt growing light, seeds and a watering system. A teacher's manual for the project is currently in the works.

"I sourced the kit from the Little Green Thumbs organization in Calgary, where they are currently running the program in a number of schools. I know that Manitoba Agriculture in the Classroom is also looking to start the program this year," Shymko said.

The Saskatchewan version of the initiative is sponsored by AITC Saskatchewan, Heifer International, the First Nations Agricultural Council of Saskatchewan and the Potash Corporation of Saskatchewan.

AITC Saskatchewan was incorporated in 1994 with a mission to "assist Saskatchewan learners in the K-12 system to increase their awareness and understanding of the complexities and importance of agriculture, through partnerships with educators, agribusiness and agriculture organizations."

The group fosters a number of innovative programs, including an Agricultural Roadshow during the summer which provides professional development opportunities for teachers. "We take a group of teachers on a traveling tour of the agriculture and food industry in Saskatchewan. It gives them ideas on how to incorporate agricultural concepts into their classrooms," Shymko said. "This year, we had 14 participants."

The organization also supplies and distributes resources, such as lesson plans and videos, to teachers through their website, [www.aitc.sk.ca](http://www.aitc.sk.ca). It is a regular participant in the Agriculture Education Showcase and the Career Expo at Canadian Western Agribition, in addition to four major agricultural shows through a partnership with the Prairieland Park Corporation School Tours Program.

For more information on the Little Green Thumbs program or the Agriculture in the Classroom organization, contact Sara Shymko at (306) 933-5224, or visit the websites [www.littlegreenthumbs.org](http://www.littlegreenthumbs.org) and [www.aitc.sk.ca](http://www.aitc.sk.ca).

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## WINTER WHEAT PRODUCTION GROWING IN POPULARITY

A winter wheat breeder and professor in the Department of Plant Sciences at the University of Saskatchewan feels that popular new varieties and an evolving agricultural industry are responsible for the rapid increase in winter wheat production over the past few years.

According to Statistics Canada data, winter wheat acres in Western Canada almost doubled between 2005 and 2006, to just over one million acres.

"One of the main reasons that it is becoming more popular, is that we have varieties that are now better adapted to Western Canada," said Dr. Brian Fowler.

Fowler says that old varieties were quite tall and readily lodged if they reached the 45 bushel-per-acre range.

"Now, the development of winter-hardy, short-straw, semi-dwarf varieties has opened up a whole new management area," he stated. "Farmers are able to go in and apply proper management techniques to their winter wheat. They are able to fertilize for optimum yield, and have limited residue to deal with afterwards, especially in some of the higher moisture areas."

The widespread switch to minimum-tillage seeding equipment is another factor that Fowler believes has played a part in the crop's resurgence. "Direct seeding is compulsory [for winter wheat], because you must have standing stubble to hold the snow for winter production. Otherwise, the crop runs a higher risk of winter-kill," he explained.

At the same time, strong growth in the feed market has spurred greater demand for the product, to which farmers are responding. "A lot of winter wheat goes into the hog industry, for example," Fowler said. "Now, with the ethanol industry on the rise, high-yielding, low-protein wheat will most likely be one of its major feedstocks. This fits right in with winter wheat."

But producers not accustomed to planting winter wheat can make a few common mistakes, according to Fowler.

"First-time growers sometimes handle winter wheat as if it were a spring crop, except sown in the fall. Unfortunately, winter wheat production is not that simple, and most of the mistakes are made before the crop goes in the ground," he stated.

(more)

For the best results, Fowler says it is important to get the crop into the ground during the optimal seeding period, which usually falls in the first two weeks of September. "One of the biggest difficulties is getting the previous crop off early enough," he observed. This can be facilitated by planting spring crops that mature earlier on the fields targeted for winter wheat seeding in the fall.

"Farmers should also make sure they have their seed and equipment in place and ready to go, because the seeding period for winter wheat is a very busy time, with the harvesting of spring-sown crops creating a big competition for labour," he added.

Fowler suggests that producers looking to grow winter wheat for the first time should talk to an experienced grower, since it requires a few different management practices. Winter wheat is priced lower than hard red spring wheat, so producers will want to make sure they are managing the crop for optimal yield.

Fowler says the yield advantage of winter wheat has been quite significant in recent years, especially when there has been good moisture in the spring.

"Once the crop is in the ground, and assuming the optimum seeding date, a shallow seeding depth and sufficient snow cover, then winter wheat is pretty easy to manage," he stated. "Farmers will only have to worry about getting their nitrogen fertilizer on in the early spring and controlling winter annual weeds."

For more information on the qualities and production of winter wheat, visit the Winter Cereal Production page housed on the University of Saskatchewan's website at [www.usask.ca/agriculture/plantsci/winter\\_cereals](http://www.usask.ca/agriculture/plantsci/winter_cereals).

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## SLEEP SEMINARS TO BE REAWAKENED

A popular seminar series on the power of proper sleeping habits will be returning in December.

The "Sleepless in Saskatchewan" workshops are offered by Saskatchewan Agriculture and Food's Farm Stress Unit and the Canadian Centre for Health and Safety in Agriculture at the University of Saskatchewan.

The series was created in part to respond to concerns from those involved in agriculture about the impact of sleep loss due to seasonal work cycles and the stresses of farm life.

"The workshop is about gaining an understanding of the dynamics of sleep, and how to make sleep work more effectively for us," said Carol Smith with the Farm Stress Unit.

The seminar is presented by John Shearer, who has done extensive research on the effects of shift work on various categories of workers. Shearer co-founded the Carleton University Laboratory for Sleep and Chronopsychology.

He is a veteran presenter, having talked to more than 800 groups and organizations over a 28-year career, including the Department of National Defence, the Canadian Air Traffic Controllers Association, the Saskatchewan Trucking Association and numerous private corporations.

"Participants learn about reducing stress and fatigue, managing shift work and extended hours, and easy, inexpensive ways to make sleep more effective," Smith stated.

She says Shearer uses humour to make the material more interesting and easier to understand. "Having attended myself, I highly recommend it as an experience for couples."

Previous editions of the Sleepless in Saskatchewan seminars have attracted audiences that range from farmers to police officers.

The agenda covers a wide range of sleep topics, such as 21st century life and how it affects our body clocks; high stress and its impact on behaviour; career commitment and its relationship to stress; how our daily routines affect our sleep; and extended work hours and their effects on our physical and psychological well-being.

(more)



During his "Science of Sleep" presentation, Shearer teaches about the various methods science has shown will increase what he calls "positive sleep," the kind of rest that truly helps heal and revive body and mind. The discussion also provides information on how diet can affect sleep, beyond the obvious of cutting back on caffeine intake.

"The whole point of the seminar is to learn how to get sleep to work for you," Smith said. "The goal is to sleep better to help you face your daily challenges."

The Sleepless in Saskatchewan series will begin again on December 4 in Saskatoon. Additional seminars will be scheduled in various locations throughout the winter months. As dates and locations are confirmed, an updated listing will be available through the Canadian Centre for Health and Safety in Agriculture website at [www.aghealthandsafetynetwork.usask.ca](http://www.aghealthandsafetynetwork.usask.ca) and through Saskatchewan Agriculture and Food's Connections Service Directory toll-free line at 1-866-680-0006.

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## CANOLA GROWERS SHOULD BEWARE OF ASTER YELLOWS

A disease that causes strange malformations is showing up in greater concentrations in this year's canola crop.

The disease is called "aster yellows," and it is caused by something called a phytoplasma – a micro-organism somewhere between a bacteria and a virus.

Penny Pearse, the Provincial Plant Disease Specialist with Saskatchewan Agriculture and Food, says, for the past six years, the incidence of aster yellows has been at trace levels of less than one per cent, but the number will be much higher this year, with some crops experiencing up to 10 per cent infection.

"We have received more reports of aster yellows in canola from both growers and agronomists, and it appears to be quite wide-spread across the province," she noted. "What makes this disease look so unique is that it causes malformations in the plant, so the plants are often taller, discoloured, and have malformed pods and flowers. The infection may look worse than it actually is, since the symptoms are so dramatic, so we recommend that growers do a count of infected and healthy plants to determine the actual incidence value."

Pearse says the phytoplasma causes the disease, but it needs a helping hand.

"A phytoplasma will not survive on its own, so it gets transferred from plant to plant by an insect vector. In this case, the most common vector is the aster leafhopper," she stated.

"When an insect feeds on an infected plant, it will pick up this pathogen and transfer it to healthy plants. So, in a year when we have more leafhoppers, we tend to see more aster yellows."

The damage done by aster yellows is complete and irreversible, with the yield loss dependent on the number of plants affected.

"Most of the diseases we have in Saskatchewan are caused by fungi, which can be controlled through the use of a fungicide. Whereas something like aster yellows, once it is in the plant, there is nothing you can do... the damage is done," Pearse said.

“We don’t know a lot about this disease,” she said. “Leafhoppers have been found to over-winter in Saskatchewan and can keep the phytoplasma alive from one season to the next. In addition, some of the perennial crops that we grow here – meaning crops with root systems that over-winter – offer a way for the pathogen to over-winter. Crops like echinacea and caraway are also at risk,” Pearce stated.

A survey of canola fields was conducted this summer to look at aster yellows and other canola diseases. Aster yellows was present in all surveyed fields, ranging from trace levels to as high as 15 per cent infection. The overall average infection level in 2007 is approximately two per cent, which is similar to 2000’s levels. It is likely that this summer’s heat amplified the aster yellows symptoms. In addition, the phytoplasma multiplies more quickly in the plant under hot conditions.

For more information, check out the aster yellows fact sheet on the Saskatchewan Agriculture and Food website at [www.agr.gov.sk.ca](http://www.agr.gov.sk.ca). It can be found in the “Production” section under “Disease.”

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## BODY CONDITION SCORING A HELPFUL TOOL FOR CATTLE PRODUCERS

Beauty may be in the eye of the beholder, but cattle producers whose incomes depend on the quality of their animals might prefer a more technical approach.

Body Condition Scoring (BCS) can be a valuable management tool for estimating the amount of energy reserves (body fat) an animal is carrying. Body condition can be used to adjust feeding programs throughout the year to optimize efficient use of available feed, to maintain herd fertility (the likelihood of cows cycling and breeding on time) and, indirectly, to maintain calf weaning weights.

In a sense, BCS adds scientific calibration to the experienced eye of the cattlegrower. Although it is still somewhat subjective as a hands-on determination, the practice is more accurate than visual appraisal alone.

Adele Buettner, the Executive Director of the Farm Animal Council of Saskatchewan (FACS), says BCS is important because even experienced producers can have difficulty picking more than the extremes of very thin or very fat animals in a herd with a mixture of body types.

"Through discerning and managing the in-between scores of the majority of the cow herd, the good cattlegrower can make a difference in controlling feed costs while maintaining productivity," Buettner stated.

To give producers more information on the practice of Body Condition Scoring, FACS has devoted one of its many Cattle FACS fact sheets to the subject.

"The information we provide through these fact sheets has been developed by committees of cattle care experts with specific knowledge in each of the topic areas covered," Buettner said. "FACS offered to co-ordinate the effort, produce the material and make it as widely available to producers as possible."

The FACS fact sheet discusses the Scottish Body Condition Scoring System, which is widely used in Canada. This system allocates a score between one and five for a cow, although half scores are also allowed.

"It is said to be an easy system to learn, and anyone can do it with a little practice," Buettner noted.

(more)

A BCS score is assigned by estimating the body fat content of the animal. This is done by applying thumb pressure on the end of the short ribs over the loin area between the hip bone (hook) and the last rib. There is no muscle at the end of the short ribs, so any padding on the ribs is fat cover. The estimated BCS score is then corroborated by visually appraising fat cover around the tail head and hips.

A score of BCS 1 indicates a cow that is "severely emaciated." An animal marked as BCS 2 is deemed to be "moderately thin." A BCS 3 cow is viewed as "optimum." BCS 4 signifies an animal that is "moderately fleshy," while a cow scored BCS 5 is determined to be "very fat."

"The experts suggest that herds should ideally be body condition scored at weaning, at calving, and 30 days before breeding," Buettner said. "Each cow should be scored, and records kept from year to year. In a large herd, scoring a percentage of cows might be a sufficient indicator."

According to the fact sheet, for optimum efficiency of winter feeding and rebreeding following calving, mature cows should go into winter with a minimum BCS of 3.0 and not drop below BCS 2.5 at calving or during the breeding season. First- and second-calf heifers should not drop below 3.0 at calving and during the breeding season.

Nutritional management strategies which focus on maintaining these BCS levels are said to result in lower winter feed costs, faster post-calving return to oestrus, a higher percentage of calves born early in calving season, and higher weaning weights.

The Cattle FACS fact sheet on Body Condition Scoring can be obtained from the council's website at [www.facs.sk.ca](http://www.facs.sk.ca) or by calling (306) 249-3227.

FACS is a membership-based, non-profit organization that represents the livestock industry in advancing responsible welfare, care and handling practices in agriculture. It endeavours to raise producer awareness of the economic and ethical benefits of animal welfare and help consumers achieve a greater understanding of animal care issues.

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